

4power



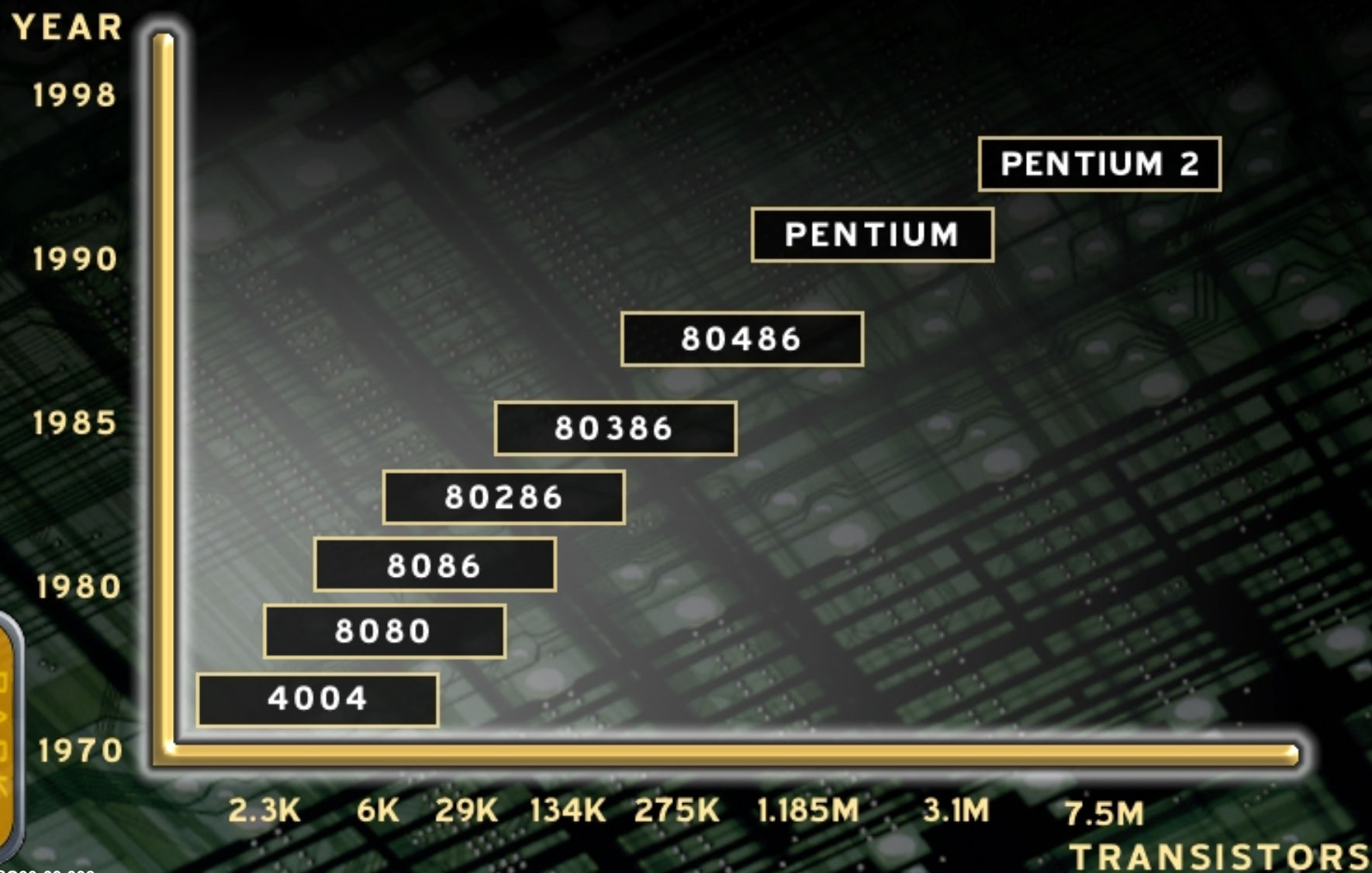
S T R I C O M

Simulation & Training Challenges for the 21st Century





Where We Were



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Where We Are

- **CURRENT STATE**

- The pace of technological development has not slowed, and it will not.
 - Moore's Law - Computing power doubles every 18 months
 - Gilder's Law - Communication bandwidth triples every 18 months

- **ADVANTAGE**

- It will permit us to do things better than our opponent;
 - First
 - Farther
 - Fastest

- **STAY THE COURSE**

- Those who can control the flow of knowledge will be advantaged.
 - Information itself will not be important however,
 - The architecture and infrastructure for its collection, processing, and distribution will be critical.



Where We Are Going

- **Battlefield will have no boundaries**
- **Global Extension of Situational Awareness**
- **Tomorrow's Warfighter will become familiar with Future Warfare as no one has seen it today**
- **A Warfighter of tomorrow will operate weapon systems that he can't see, hear, or smell.**

If we should have to fight, we should be prepared to do so from the neck up as well as from the neck down.



Modeling Human Behavioral Characteristics



HUMAN PERFORMANCE

is acknowledged as the most important factor in determining victory or defeat.

- Modeling and Simulation based on appropriate Behavioral Theory
- Needs to expand knowledge base in:
 - Understanding of interactions between stressors, training, experience and individual differences





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Internet Simulation for Embedded Training



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Working With the Gaming Industry



- **REALISM**
- **QUICK-TIME IMMERSION**
- **EMBEDDED SIMULATION/TRAINING**
- **DUAL-USE**
- **MINIATURIZATION/PC BASE**

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Simulation Based Acquisition

DIGITIZING THE ACQUISITION PROCESS

- **COMMON SYNTHETIC DEVELOPMENT**
- **MODELING AND SIMULATION STANDARDS**
- **MORE PARTNERING AND SHARING BETWEEN GOVERNMENT, INDUSTRY AND ACADEMIA**
- **MORE SHARING AND REUSE ACROSS DOMAINS**
- **CONCURRENCY IN DEVELOPMENT, TESTING AND TRAINING**

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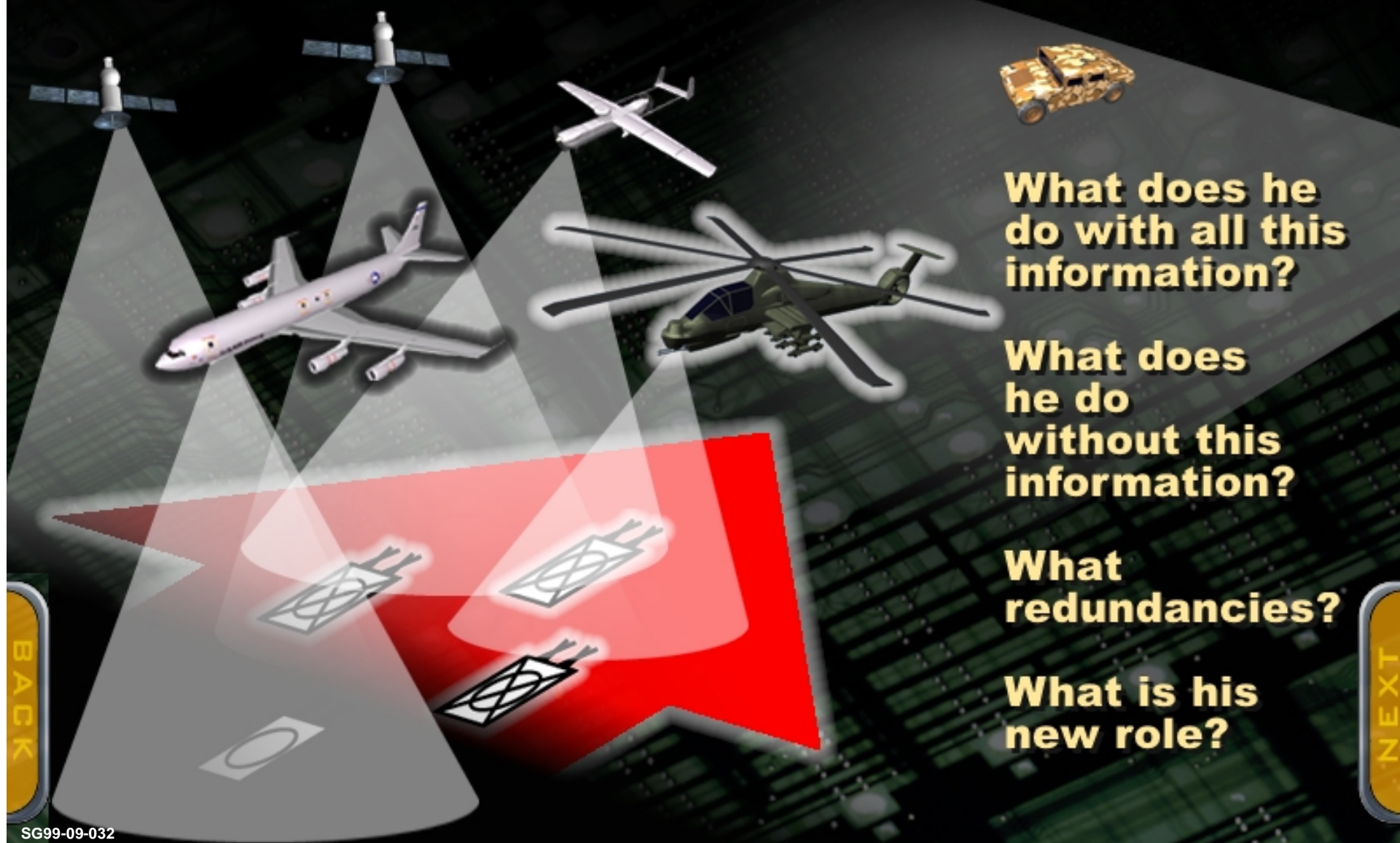




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Situation



**What does he
do with all this
information?**

**What does
he do
without this
information?**

**What
redundancies?**

**What is his
new role?**



Interoperability

Ideal goal is common synthetic environment

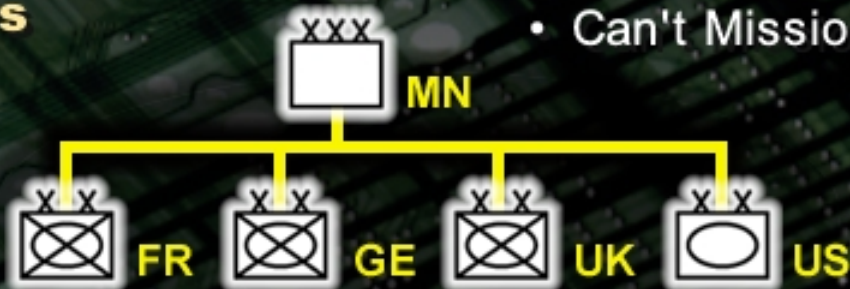
- **Life Cycle Employment**
- Operational Concept
- SMART
- Simulation Based Training
- Simulation Based Enhancement

Needs to be done at two levels — WHY? —

- **National**
- **International**
- Most Nations Operate in Coalition
- Increased Cooperative Ventures - Cost/Political Considerations
- Future Cavalry Scout Vehicle/Tracer (US/UK)
- Warfighter's Simulation (US/GE)
- Close Combat Tactical Trainer (US/UK)

Those who do not become interoperable risk becoming second class partners

- Can't Train Together
- Can't Mission Rehearse





Digitization

- **Information Dominance**
- **Situational Awareness**
 - **Where am I**
 - **Where are my friends**
 - **Where is the enemy**

Reduces Time
Increases Effectiveness
Act Before the Enemy





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Leveraging Digitization

Exploring New Synergisms

Future SMART Domain



Constructive
Simulation

Virtual
Simulation

Live
Simulation

Company/Joint

Current SMART Domain

Collective and Combined Arms

Crew

Individual

How to Leverage
what digitization
brings to the
battlefield

Battalion/Joint

Enabled by Additions to
Future SMART Product Mix:

- Course of Action Analysis/Mission Rehearsal for Contingency Forces
- Common Training Instrumentation for CTCs, Home Station, and Deployment
- Large-scale Live and Virtual MOUT
- Web-based Distributed Learning and Collective Training
- Embedded Simulation and Training
- Fixed Tactical Internet
- Commercial Military Game Adaptations

Training/Combat Effectiveness

Time/Resource/Money



Summary

RE-ENGINEERING THE TRAINING PROCESS

- INCREASE TRAINING EFFECTIVENESS
- INCREASE RETENTION
- WITHIN EXISTING RESOURCES
 - TIME
 - MONEY

CHANGE THE WAY WE TRAIN



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COMMANDER: BRIGADIER GENERAL(P) WILLIAM L. BOND

STRICOM provides the Army with training devices, simulations, simulators and instrumentation for both training and testing. STRICOM's products and the products of its subordinate agencies have been training Soldiers, Sailors, Airmen and Marines for over 50 years.

STRICOM NEWS (9/17/99)

- **Virtual Reality Modeling Language (VRML): Take a look at where 3-D on the web is heading. Applicable to distributed collaborative development, distance learning and concept visualization. (more information)**

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